



UNITED STATES DEPARTMENT OF COMMERCE
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US-15

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

IM22/0914

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APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/043,268	05/07/98	020	WALLS, D	1731 09/14/99
First Named Applicant	VAN KESSEL, 35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION PAPER AND CARDBOARD COMPRISING STARCH- AND PROTEIN-CONTAINING MATERIAL

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
1 294-44	162-174.000	B56	UTILITY	YES	\$605.00	12/14/99

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.

HOW TO RESPOND TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PATENT AND TRADEMARK OFFICE COPY

Notice of Allowability

Application No.

09/043,268

Applicant(s)

Van Kessel et al.

Examiner

Dionne A. Walls

Group Art Unit

1731

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☐ This communication is responsive to _____

☒ The allowed claim(s) is/are 1-20

☐ The drawings filed on _____ are acceptable.

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☐ Applicant MUST submit NEW FORMAL DRAWINGS

☐ because the originally filed drawings were declared by applicant to be informal.

☐ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. _____

☐ including changes required by the proposed drawing correction filed on _____, which has been approved by the examiner.

☐ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☒ Interview Summary, PTO-413

☒ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

☐ Examiner's Statement of Reasons for Allowance

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EXAMINER'S AMENDMENT

1. An extension of time under 37 CFR 1.136(a) is required in order to make an examiner's amendment which places this application in condition for allowance. During a telephone conversation conducted on Monday, September 13th, 1999, Mr. Kevin McDermott requested an extension of time for 1 MONTH(S) and authorized the Commissioner to charge Deposit Account No. 082461 the required fee of \$55 for this extension and authorized the following examiner's amendment. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. The application has been amended as follows:

IN THE CLAIMS:

Please amend the claims as follows:

1. Paper or cardboard comprising protein and starch components of flour in the paper fiber matrix, wherein the components are subjected to a degradation with ammonium persulfate (APS) and protease, APS and amylase, APS and an acid, or amylase and protease, in order to solubilize the protein and starch components of the flour, before being introduced to the paper or cardboard.

~~1025~~ A method for manufacturing paper or cardboard from a fiber matrix and flour comprising
subjecting at least the flour to a deamidation reaction and/or partial proteolysis treatment
comprising, mixing the flour with ammonium persulfate (APS) and protease, APS and amylase,

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C²
conf'd
APS and an acid, or amylase and protease, in order to solubilize the protein and starch components of the flour, and introducing the treated flour into the fiber matrix in one step.

1/18/88
C³
A method for manufacturing paper from a starting paper fiber mass, wherein vegetable material of a high protein and starch content is processed completely, comprising separating the vegetable material into (a) a fraction substantially consisting of the cellulose material and (b) a fraction substantially consisting of the protein and starch material, feeding fraction (a) into the starting paper fiber mass to form a mixed paper fiber mass, treating fraction (b) with ammonium persulfate (APS) and protease, APS and amylase, APS and an acid, or amylase and protease, in order to solubilize the protein and starch components of the flour, and introducing the treated fraction (b) into the mixed paper fiber mass in one step.

1/19/88
C⁴
Paper or cardboard having improved strength properties, stiffness properties, permeability, surface properties and elasticity comprising:

a paper fiber matrix; and

vegetable material having as main components protein and starch;

wherein said protein and starch are degraded with ammonium persulfate (APS) and a proteolytic enzyme, APS and protease, APS and amylase, APS and an acid, or amylase and protease, in order to solubilize the protein and starch components of the flour, before being introduced into the paper fiber matrix.

? 2/20/88
C⁵
A glue for forming the corrugation in corrugated cardboard, said glue comprising:

vegetable material having as main components protein and starch;

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C⁵
contd wherein said protein and starch are degraded with ammonium persulfate (APS) and a proteolytic enzyme, APS and protease, APS and amylase, APS and an acid, or amylase and protease, in order to solubilize the protein and starch components of the flour.

C⁶ ~~12~~^{12.6} The paper and cardboard according to claim 1, wherein the components are subjected to degradation with protease, ammonium persulfate, and an acid.

C⁷ ~~13~~^{13.7} The paper or cardboard according to claim 1, wherein the components are subjected to degradation with protease and amylase and then heated.

C⁸ ~~18~~^{18.5} The method for manufacturing paper or cardboard according to claim ~~8~~¹⁰, wherein protease and amylase are added to the flour and then heated.

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Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dionne A. Walls whose telephone number is (703) 305 - 0933. The examiner can normally be reached Monday-Thursday from 6:30AM - 4:00PM (EST). The examiner can also be reached on alternate Fridays.

If attempts to contact the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached at (703) 308-3837. Additionally, the fax number for this Group is (703) 305-7718.

Dionne A. Walls

September 13, 1999



PETER CHIN
PRIMARY EXAMINER